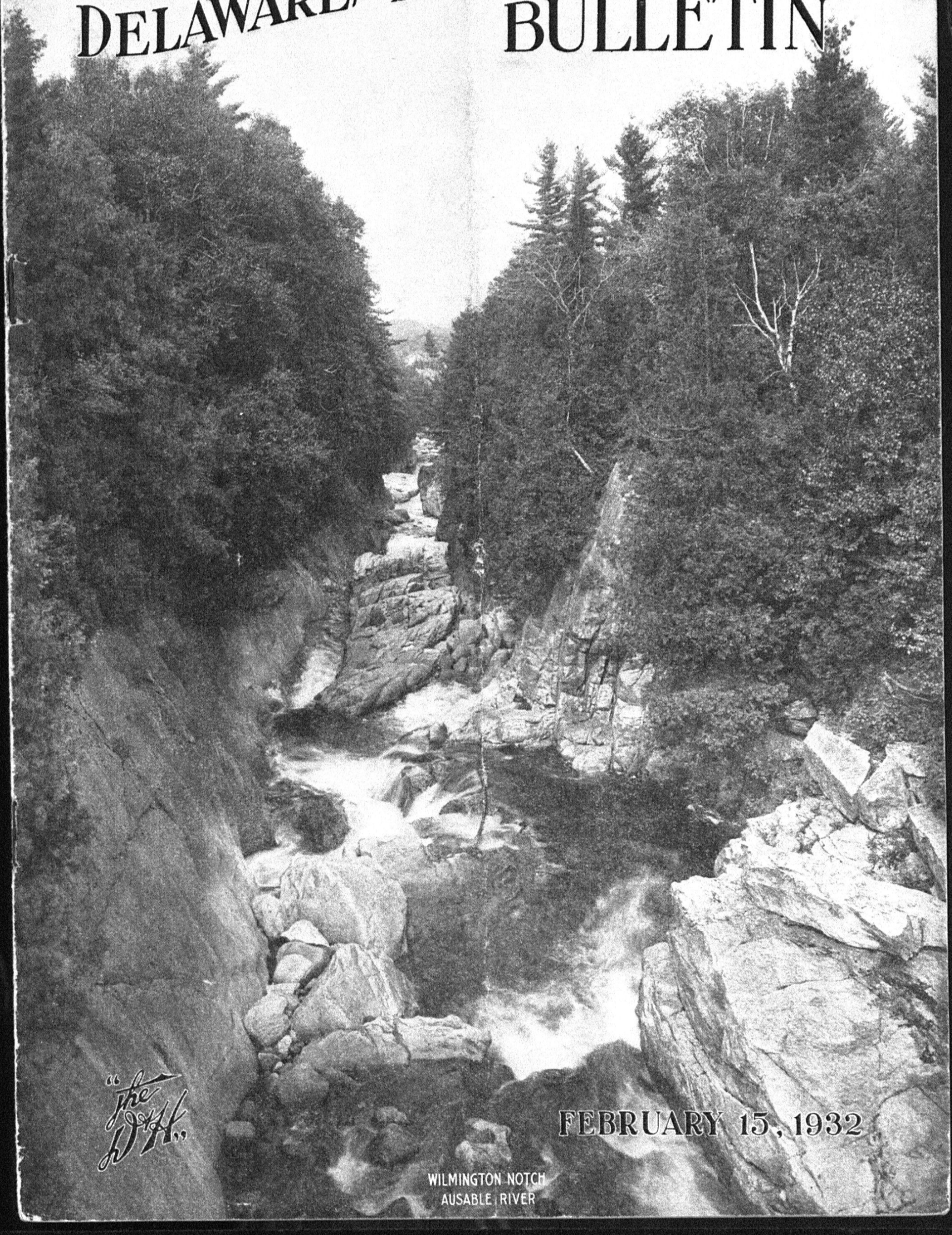
THE DELAWARE AND HUDSON RAILROAD BULLETIN



"the D&H"

FEBRUARY 15, 1932

WILMINGTON NOTCH
AUSABLE RIVER

ASSOCIATE yourself with men of good quality if you esteem your reputation. There is but one straight course and that is to seek truth and pursue it steadily.

G. Washington

"the D&H"
The
DELAWARE AND HUDSON RAILROAD
CORPORATION
BULLETIN
"the D&H"

Recalls Albany in the 70's

Retired Signal Maintainer Describes "Straggling Settlement"

AUGUST KLOTZ

"ALBANY of 1870 was merely a straggling settlement when compared with the city today," says AUGUST KLOTZ, retired Signal Maintainer and Car Repairer. "The entire block bounded by State, Eagle, Howard, and South Pearl Streets was occupied by a vegetable market; wagon loads of produce from the nearby farms lined the curb around the entire square. On the same side of State Street, below South Pearl, were large meat markets where home raised sheep, pigs, cows, and poultry were sold."

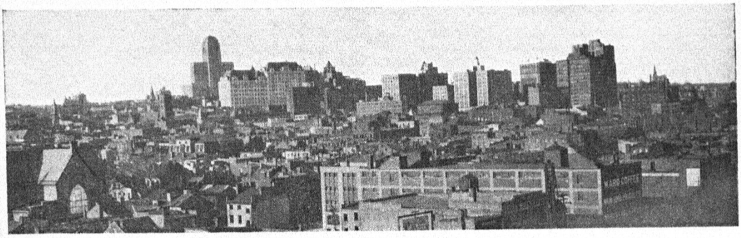
One of MR. KLOTZ'S first jobs in America was to repair the old plank toll road between Albany and Slingerlands. One side of this ten mile thoroughfare consisted of heavy hard wood planks eight feet long, ten inches wide and three inches thick; the other half was gravel. It was the only road between Albany and Slingerlands and the charges of ten cents for a single horse and fifteen cents for a two-horse team amounted to a considerable sum in the course of a year. There were three toll gates: one near where the Albany Hospital now stands, another where Whitehall Road and New Scotland Avenue intersect, and the third at Slingerlands

Equally interesting was the fact that all vehicles crossed the Hudson River on ferry boats, as there was no highway bridge.

The city itself occupied only a small portion of its present area; the land beyond the Albany Hospital and what is now Washington Park was entirely devoted to farming.

Turning back for a moment to MR. KLOTZ'S earlier life, he was born at Stogontin, Germany, a small village about 40 miles from Berlin, the son of a laborer for a rich landowner. He completed his education in a Lutheran Church School in 1870, the year in which the Franco-Prussian war broke out. None of his immediate relatives were drafted, although several of his cousins saw service in the short conflict.

Because the opportunities of a boy born in the German laboring class were negligible, the Klotz family, including the father, mother, and four sons, migrated to America in 1872, crossing the Atlantic from Bremen to New York via London on the *S. S. Donow*, a vessel with accommodations for 1800 passengers. After landing in New York, the Klotzes came to Albany immediately. Here, after one and one-half years of schooling, AUGUST



Albany Sky-line of 1932, seen from Greenbush Bridge

found his first employment on a farm at New Scotland, on the approximate site of St. Peter's Hospital today.

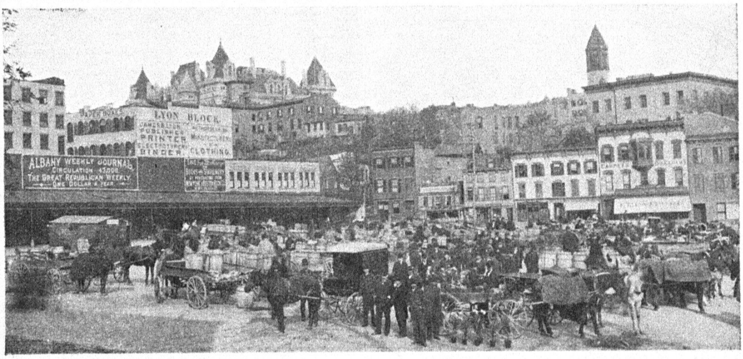
After five years on the farm, AUGUST entered the employ of the Albany City Iron Company whose plant was situated where the Port of Albany is now being developed. This firm produced all manner of iron castings, using coke and Delaware and Hudson lump anthracite in their cupolas. Scores of boatloads of anthracite from Rondout were stored nearby during the summer in anticipation of the plant's winter needs; even then many carloads arrived over the Albany and Susquehanna during the winter months. AUGUST continued in the Iron Company's employ until the plant was abandoned.

Then, on April 15, 1885, he and two cousins applied to Hamilton Patterson, Delaware and Hudson Roadmaster, for work in the Maintenance of Way Department in Albany. They were hired, at $1.05 per day, to work on the gravel train under Foreman John Sweeney.

In 1889 MR. KLOTZ was transferred to the Signal Department to assist in the erection of "KN" Tower, at Kenwood; when the tower was completed he was retained there as signal maintainer. The plant as originally constructed was materially the same as it is today: there were 38 hand-operated levers and the same number of tracks although, of course, many of the modern electrical appliances had not yet been devised. MR. KLOTZ was held wholly responsible for the upkeep of the plant and many a night he was called out of bed to repair an inoperative switch, lever, or signal.

Every automatic block signal between Albany

(Concluded on page 60)



Public Market in 80's. Note contrast of Sky-line with 1932

George Washington

1732—1932

THERE was a great curiosity about Washington even in his day. I like best the story that has come down to us about a little boy, as illustrating the curiosity he inspired," says Chesla G. Sherlock, writing in the February issue of *Ladies' Home Journal.*

When he was President, and was to appear at a public gathering in Philadelphia, a little boy pushed through the throng, loudly demanding to see "the great man." He created such a disturbance that everyone heard him, and way was made for him to pass, his embarrassed mother following.

Washington paused, and smiled down upon the boy, doubtless somewhat embarrassed himself. The boy looked him over carefully, and with evident disappointment, exclaimed: "Why, he's only a man!"

Washington gravely bowed. "Yes, my boy, I am only a man, after all!"

He was six feet two inches tall, in his stocking feet. In other words, he was far taller than the average man. He was never fat, although he was splendidly formed. He weighed 175 pounds in 1759, and 230 pounds the year before he died. His hands were large—Lafayette said he never had seen such large hands on a human being.

His complexion was colorless, pale, but his skin burned easily in the sun, giving him usually a flushed appearance. His face was coarsely formed and his nose was long and pointed. The upper part was broader than Stuart, the painter, had ever seen before. His eye sockets were larger than usually found, and placed far apart. Portrait painters found that the only way to get animation into his features was to talk of horses. He usually talked in a monotonous tone, without expression. His voice was not distinguished except on those occasions when he was aroused; then it became the strong bellow of an infuriated giant.

His eyes were dark blue, according to most accounts, although some claim they were cold gray. His hair was inclined to be sandy in youth but became dark brown as he grew older. His face was pock-marked from smallpox, and there was a fairly large mole on the right cheek under the ear. In his age, his face was heavily lined with wrinkles. His cheeks were hollow, and Gilbert Stuart padded them out with cotton when he made his famous idealistic portrait.

His feet were uncommonly large, even for a man of his size. He was thin waisted, but broad across the hips, somewhat feminine in this particular. His great strength lay in his legs and particularly in his thighs. He could easily leap a brook that other strong men could span only in two jumps. He held the broad-jump record—twenty-three feet— until only a few years ago. It has been said that no horse could throw him because he could clamp his legs tight around the barrel and *squeeze the breath out of the most unruly horse that ever lived.*

His head was perfectly round—statues and busts to the contrary. His forehead was not high, but slightly sloping. His cheekbones were high and prominent, like the American Indian. His chin did not become prominent until his false teeth altered its appearance, although the muscles of his lower jaw always seemed to clamp at the upper.

Although he carried himself erect and his back was straight, his shoulders were not square. They sloped decidedly and were no wider than the shoulders of the average man, so that his arms were carried close in to the body. The calves of his legs were huge; in fact, he seemed muscle-bound. He walked slowly, with the steady tramp of the man who is confident and decidedly sure of himself.

Washington was not naturally austere, although in his later days he gained a reputation for coldness that was unfair to the real man.

He was naturally jovial and anything but a killjoy. The reason for the apparent gravity of his manner the last twenty years of his life was due entirely to faulty teeth. While President, he suffered frequently from toothache and often appeared in public with his face so badly swollen that one eye was closed. When he had his teeth pulled, a plate was made for him by a silversmith. It fit so imperfectly that he could not laugh without the plate falling out of his mouth. He learned from the Indians how to whittle out wooden plugs to replace lost teeth. These were driven into the jaw bone and served as molars. When worn down or soft from saliva, they were replaced by new ones. He could barely close his lips over his false teeth, and it was this defect which gave his mouth such severe lines. In his youth his lips were softer and an easy repose rested on them, indicative of a love of mirth and gayety. But he could not laugh in his maturity without suffering untold embarrassment.

He was a strong and passionate man, and when aroused was deeply moved and did not easily recover his poise. Jefferson wrote: "His temper was naturally irritable and high toned........if ever, however, it broke its bounds, he was most tremendous in his wrath........" When the news of St. Clair's defeat reached him at Philadelphia, he was in such a rage that no one dared enter his room. Even Alexander Hamilton prudently waited outside for hours for the storm to subside.

At Monmouth, he was doubtless extremely angry at General Charles Lee for one magnificent instant, but it quickly passed. He could swear on occasion, and some have it that he "swore till the leaves shook on the trees, charming, delightful." Lafayette heard him swear only at Monmouth. Jefferson tells of his swearing vehemently one day in a cabinet meeting in 1793.

Stuart, the painter, said that if he had been born into a savage tribe, he would have been the foremost savage that ever lived. He had the features of the strongest and most ungovernable passions. His life was a struggle to gain mastery.

He was a man of deep emotions and oftentimes easily overcome by them. The picture of his being habitually stern and heartless, which some would paint for us, is an untrue one. Tears of emotion often filled his eyes.

When White Plains was lost and he had retreated across the Hudson, he stood watching his brave men at Fort Washington through a field glass. When he saw that they were being overwhelmed, his agitation was terrible. He commenced to cry out, and sobbed aloud when he saw the British cutting down his men with the bayonet. At last, tear-blinded, he turned away, unable to bear it any longer. He clenched his fists above his head, and cried: "Good God, what brave fellows I have lost this day!" No general ever wept more or was more easily overcome on the field, than George Washington. He could not bear to have soldiers punished near his tent, and if, on walking through camp, he saw punishment being meted out, he would either order it stopped, or turn aside so as not to see it. Tears were frequently in his eyes.

His training had led to exactness. His mother was a strong-willed and exacting parent. Punctuality was her creed and she regulated her household by the stroke of her great clock. Washington inherited this trait, and his training as a surveyor strengthened it. This has caused some to claim that he was close-fisted and miserly when it came to money matters. He expected to settle his accounts to the half-penny, and required others to do the same.

But he was generous and easily imposed upon by relatives and friends. Once he had given his confidence, it was almost impossible to shake him in his loyalty. He was a shrewd judge of men and only Benedict Arnold ever completely fooled him. He could readily overlook the faults of relatives and friends, although he might at times be irritated about them.

He liked to surround himself with gay young people because he never lost the zest of youth. He loved dancing, particularly, and even after he retired to Mount Vernon "often indulged in every set during the whole evening." When he discovered that the deference accorded him "put a damper on the spirits of the younger folks," he would dance the opening minuet, then bow formally and retire —but only to the adjoining room, where he would hide behind the door and watch the young folks through the crack, chuckling at how he was participating in their pleasures, nonetheless.

During the Revolution he entered a ballroom one night. Immediately his eye fell upon a particularly beautiful young woman. The officers, young and old, were all aflutter. With a mischievous twinkle in his eye, Washington advanced to her and claimed the first dance. Because of his rank this was his prerogative and etiquette demanded that no one else approach the young lady until he departed from her side. The feelings of the other officers may be imagined when we learn that "he continued to dance with her for three hours and one-half, *without sitting down in a chair to rest!*" The evening was then over. He had had his sly joke at the expense of every other man in the room. And one, at least, complained wistfully about it, even long years after it happened.

He enjoyed playing cards, and although he played for money the stakes were usually small. In one single week we find by examining his diary that he played cards for money five different times. His losses as well as his winnings were all carefully and punctually set down. And the entries indicate that, in the main, he was usually on the losing end.

Washington always enjoyed a practical joke, and often indulged in considerable horseplay on his own account. But his sense of humor was not limited to the banalities. He had a keen sense of wit, and often was very witty—as when, at the dinner he tendered Lord Cornwallis, after the surrender, he gave the toast etiquette demanded, "The King of England," and added under his breath, with a sly wink, "May he *stay* there!"

(Continued on page 61)

Traitor Dollars!

By SAMUEL CROWTHER

(Continued from last week)

MORE than ninety per cent of all the business done in this country is by bank checks. The money of the United States is the bank check; the amount of currency and bills used is large, but small in comparison with the total of payments.

Every bank loan turns up somewhere as a deposit—if the borrower checks his loan out from his own bank, his checks turn up as deposits in other banks. So every time a bank makes a loan the total of deposits in the country is increased. Thus a bank loan actually creates money—for every bank deposit represents purchasing power.

The principal debts of a bank are its deposits. Before the Federal Reserve System, all banks were required by law to keep a certain percentage of deposits on hand in cash or Government securities. That sum is known as a reserve.

A bank can extend credit to many times the amount of its reserve money. This credit is purchasing power of the same virtue as gold. It is what is known as bank money and it is the money we use.

Federal Reserve Banks

The Federal Reserve Banks—there are twelve of them—are banker's banks. They have no direct dealings with the public; their deposits are all from member banks. All national banks must join the system, and state banks may join under certain conditions.

Member banks must keep their reserves with the Reserve Banks. A bank may increase its lendings according to the amount of reserve required. A dollar in reserve will support a minimum of ten dollars in credit.

When a bank needs actual currency it can draw on its reserve account with the Reserve Bank and receive in return Federal Reserve bank notes.

A bank's reserve account must be in proportion to its deposits. If the reserve falls below the requirements the bank must call in its loans and reduce its deposits or send in additional reserves. It has the choice of actually making a deposit of gold or bank notes or borrowing from the Reserve Bank. By law it can borrow only on Government bonds and certain kinds of promissory notes. The borrowing on notes is termed "rediscounting" and the Federal Reserve "rediscount rate" is the rate of interest which the banks must pay for borrowing.

A large number of commercial bank's loans do not come within the definition of eligibility and it is to take over these loans and provide the banks with credit that President Hoover formed the National Credit Corporation, the capital for which comes from the richer banks. The object is to relieve those banks which have good assets that cannot be turned into money at the Reserve Banks. Among the very important loans which are not eligible for rediscount are those based upon real estate.

Five Kinds of Money

In addition to bank checks we use five different kinds of money. Each has a different value, but we make no distinctions.

Gold certificates are backed by gold to their full face value. Silver certificates are backed by the deposit of coined silver dollars. At the present prices of silver, a silver dollar is worth in bullion only about fifty cents in gold, but no one makes any distinction between a ten-dollar gold certificate and ten one-dollar silver certificates.

We also have in circulation the remnants of the greenback issue of the Civil War. These bills were issued in large quantities to pay the soldiers, and for years their value fluctuated. They are now limited by law to $346,000,000, are secured by about 50 per cent in gold and pass at their face value.

We have national-bank notes, against which the banks deposit with the Treasury certain kinds of Government bonds and 5 per cent in money.

Federal Reserve notes now constitute the bulk of our paper currency.

The amount of money in circulation no longer has anything much to do with the amount of trade, for our most-used money is the bank check. We have since 1880 been carrying steadily less currency in proportion to the price level and the amount of business.

Money is useful only for what it will buy. Its purchasing power may be used today, or stored away in a box to be used in the future, or rented

(Continued on Page 59)

Modern Sound F

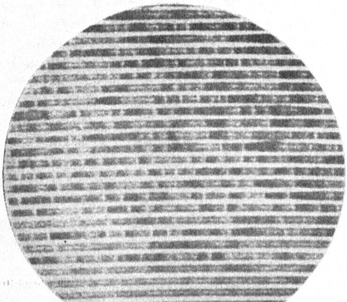
Tremendous Improvements

FOR the first time in the history of musical reproduction a group of people assembled in New York recently to hear the true notes of every key on a piano, a violin solo as it never before had been reproduced, a symphony orchestra in volume equal to the original, and finally a pipe organ in all its mightiness and most of its frequency range.

Prehistoric man, standing in the mouth of his cave, raising his voice in meaningless shouts of exultation, probably marveled at the same shouts coming back to him, a rebound from a stone cliff in the distance. Since that time man has marveled, wondered and studied the complexities, the phenomena of sound. Very likely, since the first cave man heard his echo, man has longed to reproduce his voice, to preserve it and recreate it.

Man, however, waited until comparatively recent times to achieve his desires. The first definite step toward recording sounds was more literary than actual. In 1807, Thomas Young described a method of recording the vibrations of a tuning fork on the surface of a drum. The method as described was reduced to practice by Wertheim in 1842. Leon Scott, in 1847, invented the phonaautograph, which when spoken to, recorded the voice as a wavy line on a smoked glass.

Next, in chronological order, appears the work of the man who gave us the telephone. Alexander Graham Bell applied the drum and the bones of the human ear to obtain tracings on smoked glass. He followed that with the invention of the telephone in 1875 and 1876. Since then the development of the phonograph and all forms of recording and reproducing the human voice have been evolutionary. One worker after another has contributed something, each one striving after better quality of reproduction.



On vertical cut records the grooves can be placed so that they almost touch each other as shown in this greatly magnified photograph

Better quality of reproduction means more faithful reproduction of the original sounds. Sound is a vibration or movement of air. The faster the air vibrates the higher the pitch or tone of the sound. One complete vibration is called a cycle. The number of cycles per second is the frequency of the sound. The frequency range of a phonograph is the range of sound frequencies which it will reproduce. The earliest commercial phonographs had a frequency range not greater than from 500 to 2,500 cycles. In other words, such machines would not reproduce any sound or musical note lower than 500 or higher than 2,500 cycles per second. It is understood how inefficient they were when a frequency range extending from 16 to as high as 13,000 cycles is needed to reproduce perfectly a symphony orchestra.

Naturally, then, science's attack on the problem of improving the quality of reproduction has centered upon the extension of the frequency range. However, science strove also for more volume and a more even response over the frequency range. By even response is meant that each sound reproduced shall have the same relative degree of loudness as the original sound.

Slowly the frequency range was extended; more volume was secured and the response made a bit more faithful. However, up until 1925 the phonograph was still an instrument which grated upon the sensitive ear. The reproduced voice was "tinny" and many musical instruments were impossible to record. There was hardly a single musical instrument that could be recorded with all the richness and brilliance of its overtones. The frequency range in 1924 was no greater than from 350-3,500 cycles.

Then came the orthophonic phonograph, a product of Bell Telephone Laboratories. The laboratories has applied vacuum tube amplifiers, developed electrical recording and designed a new type of reproducer and horn for the phonograph.

d Reproduction

ements of the Past Decade

They extended the frequency range lower to 120 cycles and higher to 4,500 cycles. The response was much better and the volume was tremendously improved. Orthophonic recording and reproducing revolutionized the phonograph business, pushed to the very edge of disaster by the popularity of that then new art, the radio. In 1925 orthophonic reproduction seemed the last word. It was a tremendous stride, for not only did it improve quality, but it threw out forever the old system of acoustic recording and reproducing and gave us electrical recording and reproduction which made further improvement possible.

In 1926 Bell Laboratories again startled the world with talking motion pictures. The sudden impetus given recording by the tremendous popular approval of "talkies" brought about refinements in recording technique and apparatus until today talking pictures give us sounds whose frequencies range from 70 to 5,000 cycles.

But while the world marveled and continues to marvel at the "talkies" the laboratories have not been content with this new art they gave the world.

The demonstration, referred to earlier in this article, is concrete evidence of their work behind the scenes. At that demonstration the public for the first time heard reproduced sounds ranging in frequencies from 30 to 9,000 cycles. People heard for the first time a musical reproduction from which the annoying sound of the steel needle scratching on the record was for all purposes absent. That alone is a triumph of science.

How have these things been accomplished? First the laboratories did a right about face and returned to a principle of recording attempted by Edison—the vertical cut. Commercial records today are cut laterally. The indentation cut by the recording stylus wavers back and forth across an imaginary "zero" line which is a flat spiral. In reproducing the phonograph needle travels laterally back and forth in the groove following its excursions to right and left of the "zero" line. A close fit of the needle in the groove is required. This necessitates an abrasive in the record to grind the needle to fit the groove. The steel needle and the abrasive caused the scratch.

In vertical cut recording, the recording stylus cuts into the bottom of the groove making "hills and dales" along the bottom of the grooves. With a great deal of research and development this system has been made practical and the advances made possible. Cutting in the bottom of the groove permits a deeper groove, resulting in greater volume.

A close fit against sloping sides is not required in vertical cut recording so that a permanent sapphire point may be used. This eliminates the use of an abrasive in the record for grinding the needle and thus the scratch is partly eliminated. A much lighter reproducer pick-up was developed for vertical recording which lessened tremendously the pressure of needle on record thus making possible the development of a much softer wax which further eliminated the needle scratch to the point where it is now negligible. The elimination of needle scratch which has a high-frequency sound help to make worthwhile the recording of the higher frequencies.

Development of the new record alone was a great achievement. The records used in vertical cut recording may be played several hundred thousand times without noticeable loss in quality and a 12 inch record will play from 12 to 15 minutes. New loud speakers have also been developed to handle the extended frequency range. One set of large dynamic speakers is used to carry frequencies below 3,000 cycles and another set of small speakers is used to carry frequencies from 3,000 up to the higher limit of reproduction. A new method of making records from wax originals has also been developed by the laboratories.—*Western Electric News.*

Considerable space must be allowed between grooves on lateral cut records. This reduces the amount of recording that may be put on one record in comparison with vertical cut records

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"Breaks"

WHEN tempted to complain of the "breaks" you get in business, recall this story of Rabbi Akiba, which Brian Brown tells in "The Wisdom of the Hebrews." The good rabbi set out on a journey, taking with him an ass, a rooster and a lamp. At nightfall he reached a village where he sought shelter, but without success.

"All that God does is done well," said the rabbi, and proceeding toward the forest—he resolved to pass the night there. He lighted his lamp, but the wind extinguished it; "All that God does is done well," he said. The ass and the rooster were devoured by wild beasts; yet still he said no more than "All that God does is done well."

Next day he learned that a troop of the enemy's soldiers had passed through the forest that night. If the ass had brayed, if the rooster had crowed, or if the soldiers had seen his light he would surely have met with death; therefore, he said again, "All that God does is done well."—*Wall Street Journal*.

Expensive Hazards

PUBLIC reactions are quick to things which touch the average man personally and individually. One of the newspaper columnists in Rochester, N. Y. took occasion recently to refer to the nuisance of big inter-city trucks on the main roads around Rochester. He called them "hogs of the highways," and added a further word about the still greater nuisance of trucks towing trailers, which he termed "freight trains."

The next mail brought him a host of letters from readers, either endorsing his complaints, or abusing him for not making them stronger.

One reader, for instance, commented: "These freight trains on our public highways drive motorists into ditches, hog the road, and ruin pavements which have cost the taxpayers millions of dollars."

Another reader contributed the following: "Only yesterday I was trapped behind a huge van with three trailers, and was unable to pass it for several miles. Every motorist, going in either direction, was in danger of a head-on collision if he tried to pass. The earth fairly shook under the roll of the huge vehicle. And what brought strong words to my lips was that this freight train bore an Ohio license. Is New York state building these arteries for trucking companies from other states to endanger our own motorists?"

Still a third reader, a woman living in a nearby village, wrote that she counted one "train" which had six trailers attached.

"For whom are these highways paved, anyway?" asks the columnist. "A railroad is compelled by law to own its own right of way, to maintain this in perfect condition, to provide danger signals and flagmen at crossings, to whistle at every cross road, to man every train with so many men, including engineer, fireman, conductor, flagman and trainmen and to throw every safeguard around the public. A trucking van as long as some locomotives with trailers attached, seldom has more than two men, sometimes only one, pays nothing for maintenance of way, usurps the right of way of the public and throws no safeguard around the public. It should be remedied, or stopped."—*Erie Magazine*.

Courtesy

One morning while he was riding over his plantation accompanied by a friend, a humble negro, probably a slave, raised his hat to Washington as he passed by, and to his friend's astonishment Washington doffed his hat.

After they had ridden a few paces his astonished friend asked if he was in the habit of thus saluting his slaves.

Washington's reply was significant:

"I allow no man to outdo me in courtesy."

✢ ✢ ✢

"It is a good, safe rule to sojourn in every place as if you meant to spend your life there, never omitting an opportunity of doing a kindness, or speaking a true word, or making a friend."—*John Ruskin*.

Traitor Dollars

(*Continued from page 55*)

out to someone else—that is, invested. Its value at any time depends upon what is called the price level.

Prices

Prices are thought high or low as they depart from the general price level, and the general price level is not a single price but a complicated calculation of the prices of a very large number of goods and services.

Some of the prices paid by our forefathers seem ridiculously low, but if you will compare those prices with the money incomes of the time you will find they are very high. George Washington was a rich man, but he saw precious few dollars.

If a dollar at one period will buy as much as two dollars at another, we are just as well off with a dollar as we were with two dollars. After a price level has been fairly constant for a period, prices get into a kind of rough relation with incomes. The trouble comes when the level changes, and especially when it goes down. For all prices do not change with equal speed.

We need a standard which will operate to keep money stable. Six inches is a definite measurement, but six dollars is not. This year it may buy what twelve dollars did last year, while next year it may buy only as much as three dollars would buy this year.

Declining prices make business very difficult. Manufacturers and merchants buying at one price must sell at a lower price. They must forego their profits and therefore business must close down, for no one can run for any length of time at a loss. Therefore with declining prices we always have unemployment and distress.

If all the business of the world were done by actually exchanging gold, and the gold supply doubled without any increase in the volume of business, prices would about double—for gold would be worth only half as much as before. If the supply of gold were by some accident cut to half, gold would become twice as valuable and prices would be cut to half.

Inflation

Money inflation is a term used to describe the lessening of the value of money through issuing too much of it. Germany simply printed marks and in the end made them worthless. We did almost the same thing with our Civil War greenbacks. When a Government starts printing money it never knows where to stop, and confidence is killed.

If banks lend more than the volume of business requires, the effect is the same. Prices will rise and everyone will require more money with which to do business.

In the years from 1922 to 1929 we had paid to us vast sums of gold. This gave more credit than we needed and the extra credit went into stocks and bonds. Farm lands, Southern California, Florida, and cities had real-estate booms—growing in part out of progress but largely out of free credit. For whenever any force sends up prices, people will try to buy in order to sell at a profit. That is speculation.

Speculation

Every notch that prices rise requires more money for general business, and if a boom gets wild, as did the stock market, before long the banks are being called on for more money than they can lend. Those depositors who are not speculating need extra money in order to do business at the higher prices. The member banks must borrow at the Federal Reserve in order to maintain their reserves.

The Federal Reserve Banks can control to some degree the price of credit but, after a boom has well started, the speculators will pay anything for money.

People cannot, however, live by taking in one another's washing. Some must work and produce. During a speculative period, people do try to live by taking in one another's washing and they all think that they are making money, for prices are rising and anything one buys can be sold for more than it cost.

The rising prices make corporation earnings seem larger and usually they are actually larger, for people spend freely; the dividend rates increase and the prices of stock go up to the new price level.

As a boom continues, real business declines because it cannot pay the rising interest rates for money. The end of a boom comes when money can be borrowed only on outrageous terms or when some outside force, such as a foreign nation, takes gold out of the country.

A decrease in gold, since gold is the basis of credit forces the banks to withdraw credit by calling in loans. This decreases deposits—for each loan is somewhere a deposit.

During a boom, people are always nervous and, once prices start down, the banks must get in their money quickly to avoid loss. A bank has no right to jeopardize the funds of its depositors. It cannot lend a hundred dollars on what sells for two hundred dollars today but may sell for fifty dollars tomorrow. This causes forced sales which further depress prices. The losses of last fall were largely of this kind.

Depression

As credits are called, the amount of bank money outstanding lessens and all prices begin to go down. This further forces credits down and we have a period of falling prices and of business depression. Sound merchants will not undertake new enterprises against falling prices, and so they will not borrow.

Therefore, with bank credits decreasing and prices falling still further, we have unemployment and a great talk about surplus of products and overproduction. What is really lacking is the means with which to buy. Money has failed in its function as a method of exchange.

The vast sums of money lost in the stock market during and since the crash of 1929 will be found in the lessening of bank credits. It is often asked who gets the money lost. No one gets it. The money was created by loans and the loans are wiped out and the deposits they represented are wiped out.

Some of the losses are of hopes expressed in dollars but never translated into dollars. If I buy ten thousand dollars of a stock, borrowing five thousand dollars from a bank, and the stock goes to twenty thousand dollars and drops to twenty-five hundred dollars, I have lost only seventy-five hundred dollars. I cannot lose the ten thousand dollar profit I never took.

But it does not seem possible to lose seventy-five hundred dollars without someone getting it. The man from whom I bought got ten thousand dollars, but I did not lose my money to him. He did not swindle me. I bought at the market price and then the price changed. A thing that was worth ten thousand dollars suddenly became worth only twenty-five hundred.

The five thousand dollars that I borrowed from the bank disappeared in the wiping out of a loan and a deposit. The twenty-five hundred dollars that came out of my one pocket was a real loss, but no one got it—just another bank deposit grew less. The purchaser at the new low figure got the stock that I owned at a price less than I paid for it. That is all. He may have gotten a bargain, but he did not get my money. It is just that the price level changed and we began to use less money.

All this may seem chaotic. It is. The great problem of the world today is to find some kind of money standard that will stay put. Something other than money is always blamed for troubles like depressions, which do not seem, on the face, to be financial at all. We shall not have want existing in the midst of plenty when we find a stable money.

Albany in the 70's

(Continued from page 52)

and Rouses Point bears mute evidence of the industry of Foreman William Sill, MR. KLOTZ, and the rest of the men who erected them. It took between five and six years to build the foundations, set up the poles, install the electrical mechanism, and connect the circuits on these hundreds of signals.

This lengthy task completed, MR. KLOTZ served one year as lampman in the Kenwood yards. He rounded out his 46 years of Delaware and Hudson Service as a Car Repairer at Colonie, retiring on August 1, 1931.

MR. and Mrs. KLOTZ, who now live at 114 Second Avenue, Albany, have two daughters living: Mrs. Charles Isler of the same address, and Mrs. John Hennessey, also of Albany.

Progress

IN 1817 George Washington's birthday was celebrated at Philadelphia with a great ball. To illuminate the ballroom, torches were applied to 2,000 wax candles which produced 1,000 candle power for five hours. The cost of that illumination was $150.

Today, merely by the throwing of a switch, the modern ballroom can obtain the same amount of light with less glare, for fifty cents—one three-hundredth of the cost 115 years ago.—*Edison Life*

Double-Check, but No Check

Son in college was applying pressure for more money from home.

"I cannot understand why you call yourself a kind father," he wrote his dad, "when you haven't sent me a check for three weeks. What kind of kindness do you call that?"

"That's unremitting kindness," wrote the father in his next letter.—*Capper's Weekly.*

Couldn't Fool Her!

"Bridget, it always seems to me that the unkindest mistresses get the best cooks."

"Ah, ma'am, go on wid your blarney."

George Washington

(Continued from page 54)

Even Cornwallis laughed, and immediately became Washington's lifelong friend.

At Valley Forge, General Greene, standing with a group of officers before his headquarters, attempted to show some of the younger men how to jump up and crack their heels together. They were hard put to it to keep warm. At his first attempt he lost his footing and plunged headfirst into a snowdrift. Washington appeared at that instant, and "laughed until the tears ran down his cheeks, holding his sides and gasping for his breath." When he could speak he observed, "Ah, Greene, you ever were a lubberly fellow!"

John Marshall, later Chief Justice, and Judge Bushrod Washington, favorite nephew of Washington, were on their way to Mount Vernon. They had placed their best clothes on a stage behind them, as they were traveling on horseback. When they reached the timber skirting the long entrance driveway they dismounted, took the case holding their clothes, stripped to the skin in order to change to their best before putting in an appearance at the mansion. When they were stripped bare and opened their baggage a lot of soap and feminine finery rolled out. Their baggage had been mixed with that of a peddler who traveled with them the day before. As they stood looking at one another in speechless consternation they were startled to hear loud laughter and Washington, himself, rolled out of a nearby thicket, overcome with amusement. He had been out on his plantation and was watching them when they started to undress. When they recovered from their surprise all three enjoyed a great laugh.

When the King of Spain made Washington a present of a jackass he slyly remarked that he would like to name it for the donor, if he dared. This appealed to him so much that he mentioned it in no less than sixteen letters he wrote to his friends, one being to Lafayette. He finally compromised by calling the beast, "Royal Gift."

When he made a tour during his Presidential service, he was greatly annoyed by the crowds of people in one town. He recorded in his diary, "Having suffered very much by the dust yesterday, and finding that parties of Horse, and a number of other Gentlemen were intending to attend me part of the way today, I caused their enquiries respecting the time of my setting out, to be answered that, I should endeavor to do it before eight o'clock; but I did it a little after five, by which means I avoided the inconveniences above mentioned."

Washington was a hard worker. When asked how he could do so much he replied: "I rise at four o'clock, and a great deal of my work is done while others sleep." He always retired promptly at ten o'clock, thus getting six hours' sleep. He had an immense capacity for detail. He carried on a tremendous correspondence and in addition wrote letters for his wife, who was poorly educated, which she laborously copied—his poor spelling and all! He rode fifteen miles daily, making the rounds of his plantation, in sunshine or storm. He managed to keep up with the news of the day, and found time to chat with guests before retiring. His journals and account books were up to the minute. He surveyed his home grounds and had a plot of his wild lands.

Few men are absolutely fearless. Washington was one of these; Benedict Arnold, in battle was another. After his youthful brush with the French and Indians at Fort Necessity, he wrote, exultingly: "Believe me, there is no Musick so charming as the Whistling of Bullets!"

Early in the Revolution, he came upon a Virginia company and a Massachusetts battalion engaged in a free-for-all fight. The New Englanders had laughed at the ragged shirts of the Virginians and the latter had taunted the former about the seats of their pants being out. Washington tossed the reins of his charger to his black bodyguard, leaped to the ground and waded into the melee until he had a ringleader in each hand. Holding them by their throats, he banged their heads together until all fight was knocked out of them. Then he held them firmly at arm's length, while he talked to and shook them severely. He was totally oblivious of the milling hundred men around him.

One afternoon at Mount Vernon, when he was sixty-five years old, he was standing on the front lawn talking to guests, when a shot was heard down on the river bank in front, in his private deer park. He leaped on his horse, which he had just been riding, and dashed down the hill. Two of his guests followed. They arrived in time to see a poacher, whom Washington had ordered again and again to stay off his land, shoving his canoe into the river. In the canoe was one of Washington's deer. Washington plunged into the river after the man, who now stood up and leveled his rifle at him, full in the face. Washington grabbed at it just as the poacher pulled the trigger. The piece snapped and did not go off. Washington jerked the fellow out of the canoe, dragged him ashore by the collar, and gave him a terrible beating. He was beside himself with anger, his eyes blazing, his nostrils quivering. The poacher nearly died from his trouncing, but he did not poach

5 9
3 6
9 5

again. Washington was not afraid of that rifle; he said later that the thought of being shot never entered his mind.

"I am not afraid to die. Whether it comes now or twenty years hence, makes no difference," he said once. When he was on his deathbed and could speak only with great difficulty, he said to Doctor Craik: "Doctor, I die hard, but I am not afraid to go. I believed from my first attack that I should not survive it. My breath cannot last long." And later, his last words were: "'Tis well."

Too Successful

AN old man went to a rejuvenation specialist and asked how much it would cost to rejuvenate him.

"To make you 30 again, it will cost you $1,000," said the surgeon, "but to make you 25 again it will cost $2,000, and anything below that age $5,000."

"I don't care about the cost; just make me eighteen again," said the oldster.

The operation seemed to be a success. But when the surgeon sent in his bill, the rejuvenated one sent it back with this notation:

"You can't collect from a minor!"

Split Seconds

TENTHS of a second are an eternity at the race track, and a few thousandths of a second often means a matter of dollars and cents in the handling of big electrical machinery.

But probably the shortest time that ever worried an engineer is on the mind of Dr. Mouromtseff, who is experimenting with short-wave radio tubes in the Westinghouse Research Laboratories. He must time an electron as it travels a fraction of an inch inside the tube—about one six hundred millionth of a second.

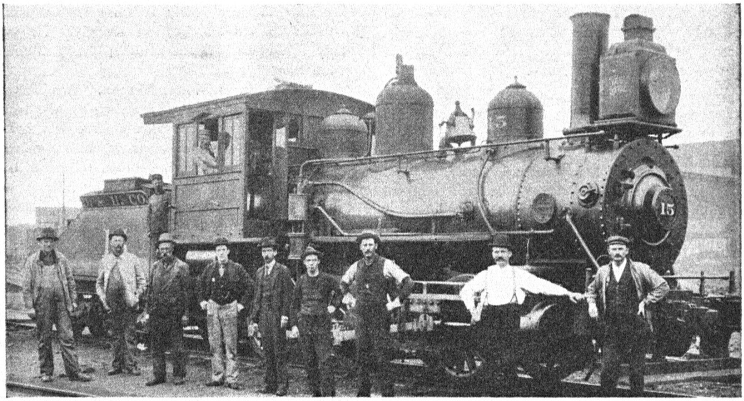
It takes sound 6,000 times longer to travel an inch, and it would take a bullet sixty times longer to pierce the paper on which this is printed. There is no guess work about these minute measurements. They are determined far more accurately than the average man estimates how long it will take him to walk up a flight of stairs.—*New York Times.*

Comparison!

"Come, Maisie, kiss your old uncle and I'll give you a penny!"

"Pooh! Mamma gives me more than that to take castor oil!"

At Binghamton in 1900



In gangway, Fireman Henry Cunningham; Engineman Osmer Whitaker; standing on ground, left to right; Michael Campion, Neil Sullivan, Andrew Quilligan, Mr. Moriarity, John Gallivan, J. F. Bosher, James Kane, Charles Sheehan, and MICHAEL TOUHEY.

Clicks from the Rails

Unusual Memento

When J. A. Parant, a Boston and Maine engineer, returned from Cuba where he had devoted a leave of absence to assisting the Consolidated Railways of Cuba on engineering matters, he was presented with a most unusual souvenir. It was a cannon, dug up at Nevitus, Cuba, which was identified as dating from 1484 and as having been brought to Cuba on one of the ships of Christopher Columbus. The cannon, about three feet long, is mounted on a carriage of native wood, hand carved and decorated with Spanish and Cuban coats of arms. It weighs about 200 pounds.

Dogs on Trains

Dogs used to guide blind passengers will henceforth be carried in passenger cars on the Pennsylvania without charge, provided their masters carry proper credentials issued by the American Foundation for the Blind, Inc. Certified dogs are carefully trained to lead their masters around obstacles, to turn right or left at command, and to avoid moving vehicles. Each dog wears a special harness with a stiff U-shaped handle held by his master. Every movement of the dog is instantly felt through this handle.

Heavy Penalties

Four railway workers in Siberia were recently sentenced to death for their responsibility in connection with the collision of a freight and a passenger train. The engineer of the freight was intoxicated and was killed at his post. His fireman was sentenced to be shot for not reporting his intoxication. The train dispatcher was likewise sentenced to death for not stopping one of the trains. The station master and conductor were also executed.

Accommodations Stolen

A Pullman conductor, checking a car on the *Sunset Limited* leaving San Antonio, Tex., found a drawing room door locked, though there was no sale indicated on his diagram. Ringing of the bell and attempts to force the door were fruitless. When the train stopped at a small station the train crew entered through the window and found a 16-year old boy asleep on the lounge. His only response to inquiries as to how he got in the room and why was, "I wanted to ride home."

French Signals

Three million dollars are to be spent by the French railways in the next five years to bring their signals up to date. Standardization of signalling on all the French railways is contemplated, and the existing mechanically operated signals are to be replaced by new signals of the three-aspect day color light type.

Another Towerwoman

Some time ago *The Bulletin* printed an item about a Mrs. Holmes, of Detroit, who operated a signal tower. Now comes advice that Mrs. Grace W. Hitchcock of Spokane, Wash., operates an electric interlocking plant. Her 24-lever tower controls the movement of trains on two railroads.

Elephant Stops Train

New Haven passenger train No. 10 was stopped at Mill River Junction recently when the air whistle blew in the locomotive cab. Investigation developed that an elephant in the head baggage car had pulled the communication cord. "He probably wanted to get out and take a swim in Mill River," commented a New Haven official.

Stoves in Yards

There are 1065 places in the North Station yard, at Boston, Mass., where you can cook a meal on the rails in winter. These stoves—officially known as gas switch heaters—are placed under switches to melt snow and ice and thereby prevent breaks in the operation due to clogged switch points. Obviously, they also do away with the necessity of continually sweeping the switches in winter. The flow of gas in the feeder pipes is regulated from a signal tower and the flow can be adjusted to prevent the formation of ice in mild or blizzard weather.

Golden Anniversary

On November 19, 1931, the Pennsylvania Limited, oldest limited train in America, celebrated its fiftieth year of continuous operation between Chicago and New York. Impressive ceremonies were held in the Pennsylvania station in New York before the crack train started on this epoch making trip. Serving as guest waiter in the dining car was Louis P. Davis, the only living member of the dining car crew of the "Pennsylvania Limited" in 1882. Although now retired, he came back to work for the one-day celebration.

Coffee for Fuel

Inferior grades of coffee, compressed into bricks, will be used experimentally as locomotive fuel on the government-owned Central Railroad of Brazil as a means of disposing of low-grade coffee and thus improving both the quality and price of exports. Jose America, Minister of Public Works, recently authorized this measure as a supplement to burning the surplus or dumping it into the ocean. In former years pulverized coal at $40 a ton, and oil have been used as fuel.

Just a Minute

I HAVE only just a minute,
Only sixty seconds in it,
Thrust upon me, can't refuse it.
Didn't seek it, didn't choose it,
But it's up to me to use it.
I must suffer if I lose it,
Give account if I abuse it.
Just a tiny little minute,
But eternity is in it.

—HERBERT M. COUSE.